

1160 W. Orange Grove Ave., Arcadia, California 91006, U.S.A.

THE HEATHII-WHITE BANDING
ABERRATION IN THE STRYMONINAE

(LYCAENIDAE)

MICHAEL S. FISHER

6521 South Logan Street
Littleton, Colorado 80121

ABERRATIONS IN MEMBERS OF THE LYCAENIDAE, as in members of other Lepidoptera groups, are exceedingly rare. Their occurrence within the members of the subfamily Strymoninae are certainly more strikingly pronounced. Unlike aberrations in other groups, this aberration described and illustrated here is a re-occurring and consistent trait, although varying in intensity. The purpose of this paper is to present an account of the "heathii-type" of white banding aberration within species of hairstreaks presently known to the author.

Perhaps the first note of this remarkable aberration was in 1904 with its description by James Fletcher based on one specimen taken in southern Manitoba by E. F. Heath. The specimen was named *Thecla heathii* (see Fletcher, 1904, *Can. Ent.* 36:125-127). Barnes & Benjamin (1926) and McDuunough (1938) list it as a distinct species. Field (1938) mentions that Dr. A. H. Clark informed him that it was an aberration of "*Strymon falacer*." Dos Passos (1964, 1970) correctly treats it as "*ab. heathii*" assigned to *Satyrium calanus falacer* (Godart) in the latter paper.

Stallings & Turner (1943) discuss and figure *heathii* and *heathii*-like *Phaeostrymon alcestis* (Edwards) taken at one locale the same year in Oklahoma and one of the former (of *S. calanus godarti* (Field)) from Beulah, Colorado. They also list other individual specimens with *heathii* markings in one additional *P. alcestis* from Oklahoma and an *Euristrymon ontario autolytus* (Edwards) as reported to them by fellow colleagues. Although they mention the condition in *S. tetra* (Edwards) (see Comstock, 1927, Pl. 49, Fig. 14), an examination of material in the collection of the author show the tendency of this condition in that species to be extensive overscaling rather than distinct banding. Brown (1957) briefly notes *heathii* from Colorado as reported by Stallings & Turner and also from specimens taken in the Rabbit Ears Pass region which he figured. More recent

occurrences of all of these as well as in other species has become known to me within the past two years.

The aberration is an over expression of the white scales of the submarginal and post median row of spots, usually on both fore and hindwings of the ventral surface. This produces a white band occupying the vein interspace of these markings. The expression of the condition is variable. It may occupy only a portion of the interspace on either wings or both and may be asymmetrical or completely bilateral. This is well illustrated by comparison of the two *Strymon melinus* (Hubner) in Fig. 1. Some overlap may occur discally or marginally in well expressed examples and may generally affect all white scaling. The blue anal patch on the hindwings may be obscured by white over-scaling but the red-orange spots in the hindwing submarginal series hold true color very well. Distinct banding seems to occur only in those species with broken lines of the maculation described. *E. ontario* (Edwards), *P. alcestis*, *S. melinus* and *S. calanus* (Hubner) are examples. Species with rounded spots forming the discal maculation of both wings aberrate with the white bands forming a distinct arrow shape from the submarginal band members to each discal spot. *S. californica* (Edwards) and *S. acadica* (Edwards) are examples. Figs. 1 and 2 show examples of these aberrations including one example in *Mitoura gryneus castalis* (Edwards). The occurrence of this condition in a wider number of species in the Strymoninae may tend to indicate some genetic origin. This is supported by the frequent occurrence of individuals exhibiting the trait in the population of *S. calanus* in the Rabbit Ears Pass region of Colorado. Whether this is true or a combination of physical factors is unknown, but it is obviously similar occurrences in much varied habitats.

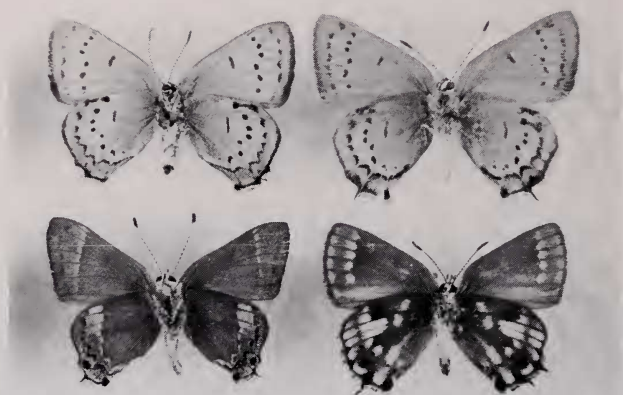
SUMMARY

The *heathii*-white banding aberration in members of the subfamily Strymoninae has been described in seven species of five genera. There is no trend of this aberration to favor one sex, although collection of additional examples may show this in some species in certain areas. No new names are suggested to apply to this condition in those species previously unreported with the character. The name *heathii* of course will be retained as the classic example of this remarkable condition. The character best show the relationship of species and subspecies within the



1

Fig. 1.—Left to right, Top Row: *S. calanus falacer ab. heathii* (typical), 2 mi. N.W. Croton Dame, Newaygo Co., Michigan, 10 vii 71, leg. J. Hafernik (compliments of Mogens Nielsen); *S. calanus* ssp., Rabbit Ears Pass, Routt Co., Colorado, 22 vii 73, leg. Mike Fisher; *S. calanus* ssp., 5 mi. S. Fayetteville, Washington Co., Arkansas, 27 v 72, leg. and compliments of J. R. Heitzman; Bottom Row: *S. melinus humuli* (Harris), Allegan State Game Area, Allegan Co., Michigan, 5 vii 75, leg. and compliments of Irwin Leeuw; *S. melinus franki* (Field), .4 mi. E. Boxelder Creek, Arapahoe Co., Colorado, 4 viii 74, leg. Mike Fisher; *P. alcestis*, Medicine Lodge, Barber Co., Kansas, 2 vi 74, leg. and compliments of J. R. Heitzman.



2

Fig. 2.—Left to right, Top Row: *S. acadica*, Lansing, Ingham Co., Michigan, 10 vii 51, leg. R. Hodges (compliments of Mogens Nielsen); *S. californica*, Yosemite, California 28 vi 37, compliments of Julian P. Donahue, L.A. Co. Museum collector; Bottom Row: *E. ontario* ssp., Fayetteville, Washington Co., Arkansas, 27 v 71, leg. and compliments of J. R. Heitzman; *M. gryneus castalis*, Bastrop State Park, Bastrop Co., Texas, 12 vi 68, leg. and compliments of J. R. Heitzman.

subfamily not only within species complexes but between them and also across generic lines in dissimilar species. This trait may also represent the characteristic maculation found in the ancestral species common to the members of this subfamily. It is truly a unique character within the subfamily and is expected to occur, though very rarely, in other members within it.

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